Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

in the processes of earthquake movements, and only a part of this vapor is restored to the surface through volcanic action, there is a secular desiccation of the oceans, but the process is excessively slow and not certainly recognizable during the historical period, though a part of the lowering of the strand line in later geological ages is no doubt traceable to this cause.

21. The elevation of the plateaus depends on the same cause which upheaved the mountains; and all plateaus, like the mountains, are underlaid with various forms of pumice, which accounts for their feeble attraction as shown by geodetic observations.

22. No doubt various chemical changes go on under the earth's crust where the water has penetrated the lava and the steam becomes superheated, but the predominance of water vapor in volcanoes shows that the other gases are only by-products, incidental to the moisture and great heat. Dissociation of water vapor is one of these effects.

23. The details of mountain structure admit of explanation on the present hypothesis, while heretofore no such explanation was forthcoming. A theory which accounts for the position of the ranges relatively to the sea, the slopes of the ranges, and the side spurs, and the relation of mountains to earthquakes and volcanic phenomena, should have a strong claim to acceptance. This theory was partially foreshadowed by the Arabian astronomer Avicenna, in the tenth century of our era.

24. The theory of the penetration of sea water into the crust of the earth and its connection with volcanoes and earthquakes dates back to Lucretius and Aristotle, while the upheaval of the land is distinctly announced by Strabo. We have, therefore, been simply verifying and extending the impressions of the ancients formed from the general aspects of nature long before the sciences had become exact. (Pp. 403–7.)

It is only fair to Avicenna, Lucretius, Aristotle, Strabo, and other distinguished authors quoted in this paper, to remark that they are not to be held responsible for all of the assertions of putative fact and physics with which their views are associated in this paper.

T. C. C.

---

1. *Some Additions to the Carboniferous Terrestrial Arthropod Fauna of Illinois.* By A. L. MELANDER. (*Journal of Geology,* Vol. XI, No. 2, February–March, 1903, pp. 178–98, Plates V–VII.)
2. *Some New Structural Characters of Paleozoic Cockroaches.* By E. H. SELLARDS. (*American Journal of Science,* Vol. XV, April, 1903, pp. 307–15, Plates VII, VIII.)
3. *Discovery of Fossil Insects in the Permian of Kansas.* By. E. H. SELLARDS. (*Ibid.,* Vol. XVI, October, 1903, pp. 323–324.)

4. *Zur Phylogenie der Hexapoden.* By Anton Handlirsch. (*Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften in Wien*, Mathematisch-naturwissenschaftliche Klasse, Vol. CXII, 1903, pp.1–23.)
5. *Eine neue Blattinaria aus der Oberen Steinkohlenformation* (Ottweiler Schichten, Rheinpreussen). By Fernand Meunier. (*Jahrbuch der Königlichen Preussischen Geologischen Landesanstalt und Bergakademie*, Vol. XXIV, No. 3, 1903, pp. 454–57, Plate XVIII.) (1904)
6. *Les insectes houillers de la Belgique.* By Anton Handlirsch. (*Mémoires du Musée royal d'Histoire naturelle de Belgique*, Vol. III, 1904, pp. 1–18, Plates I–VII.)
7. *Über einige Insektenreste aus der Permformation Russlands.* By Anton Handlirsch. (*Mémoires de L'Académie impériale des Sciences de St-Pétersbourg*, Série 8, Classe physico-mathématique, Vol. XVI, No. 5, 1904, pp. 1–7, with one plate.)
8. *A Study of the Structure of Paleozoic Cockroaches with Description of New Forms from the Coal Measures.* By E. H. Sellards. (*American Journal of Science*, Vol. XVIII, August–September, 1904, pp. 113–34, and 213–27, Plate I and 37 text figures.)
9. *Un Nouvel Insecte Fossile du Carbonifère de Commentry.* By Al. N. Agnus. (Rev. Scientifique du Bourbonnais et du Centre de la France, Feb.–March, 1904, pp. 39–43; with one text figure.)
10. *Palæoblattina douvillei Brongnt.* By Al. N. Angus. (*Ibid*, April, 1904, pp. 85–86.)
11. *Revision of American Paleozoic Insects.* By Anton Handlirsch. Introduction by Charles Schuchert; translated by Lucy P. Bush. (*Proceedings of the U. S. National Museum*, Vol. XXIX, 1906, pp. 661–820.)
12. *Die fossilen Insecten und die Phylogenie der recenten Formen.* By Anton Handlirsch. Lieferungen I–IV, with 36 plates. Leipzig: Wilhelm Engelmann.
13. *Types of Permian Insects .* By E. H. Sellards. Part I, Odonata. (*American Journal of Science*, Vol. XXII, September, 1906, pp. 249–58; text figures 1–8.)

14. *Geological History of Cockroaches.* By E. H. SELLARDS. (*Popular Science Monthly*, March, 1906, pp. 244–50.)

15. *Haben die Paleozoischen Blattiden im Hinterflügel ein Praecostalfeld?* By DIETRICH V. SCHLECHTENDAL. (*Zeitschrift für wissenschaftliche Insektenbiologie*, Vol. II, March, 1906, pp. 47–50.)

16. *The Wing Veins of Insects.* By C. W. WOODWORTH. (*Technical Bulletins*, California Agricultural Experiment Station, Vol. I, 1906, pp. 1–152.)

1–5. Melander's paper is largely systematic. Two new genera of Hexopoda are described, *Petromartus* and *Protodictyon*, and one new genus of Arachnoidea, *Hadrachne.* The arachnid and insect material from the Carboniferous of Illinois contained in the Walker Museum of the University of Chicago, including two specimens from the Chicago Academy of Science, is identified and listed, and the type specimens are indicated. The classification of insects proposed by Scudder is followed. Sellards identifies the fossils previously known as *Dipeltis*, and referred by Packard and others to the Crustacea, as the nymph stages of cockroaches, and gives also a description of additional nymph and adult cockroaches, including a new genus of very large cockroaches, *Megablattina* (Sellards, non Brongniart; changed later to *Archoblattina*). The presence of an ovipositor is recognized on certain fossils identified as nymph cockroaches. The second paper by Sellards reports the discovery of insects in the Kansas Permian. The comparatively rare occurrence of insects in the Permian deposits is mentioned. The lack of definite record of insects from deposits older than the Carboniferous is noted. Handlirsch's paper is concerned with the Hexopoda in general, and proposes a revised classification for the group as a whole. The Hexopoda in this classification fall into four classes: Collembola, Campodeoidea, Thysanura, and Pterygogenea. Thirty-four orders are recognized, twenty-eight of which (grouped under eleven subclasses) are referred to the Pterygogenea. The Paleozoic insects are passed in review, and their place in the proposed classification, is indicated. Meunier gives a description of a new Coal Measure cockroach referred to the genus *Etoblattina* (*E. pygmaea* n. sp.).

6–10. The insects known from the Coal Measures of Belgium are referred by Handlirsch to fifteen genera, twelve of which are described as new. The insects described are regarded as representative of four orders, three of which—Paleodictyoptera, Megasecoptera, and Protorthroptera—are exclusively Paleozoic, while the fourth, Blattoidea, continues to the present. Eleven genera of insects are recognized from the Russian Permian, nine of which are described as new. Three genera are referred to the Ephemerids, and one doubtfully to the Perlidae. The group Paleohemiptera is proposed for two genera, *Presbole* and *Scytinoptera*, regarded as ancestral to the Hemiptera. Mantidae-like forms are represented by the genera *Paleomantis* and *Petromantis;* the Blattoidea are represented by two genera, *Limmatoblatta* and *Aissoblatta.* Sellards regards the Paleozoic, Mesozoic, and modern cockroaches as making up a group of superfamily rank under the order Orthoptera, for which the term "Blattacea" is proposed. The body and wing structure of Paleozoic cockroaches is described, and the lines of specialization are discussed. In the first of the papers listed Angus described a new cockroach, *Etoblattina Gaudryi*, of which one hind wing, lacking the anal area, and the two front wings are preserved. The second paper by this author records a reexamination of the supposed Silurian fossil insect. *Palæoblattina Douvillei*, with the conclusion that this fossil does not represent an insect but pertains to the trilobites, and is in fact a part of the genal angle of one of the Asaphidæ.

11–16. Nine orders are regarded by Handlirsch as present in the American Paleozoic, as follows: Palædictyoptera, Protodonata, Megasecoptera, Hadentomoidea (new order), Hapalopteroidea (new order) Mixotermitoidea (new order) Protorthroptera, Protoblattoidea (new order,) and Blattoidea. Of these the first eight are regarded as being replaced in later deposits by other orders, the Blattoidea alone having continued to the present time. Twenty-five genera are referred to the Paleodictyoptera, seventeen of which are new. Two Protodonate genera are recognized from the American Carboniferous, *Paralogus* Scudder and a new genus, *Palætherates.* Two American genera, *Rhaphidiopsis* Scudder and *Adiaphtharsia* gn. n, are referred to the order Megasecoptera. The new order Hadentomoidea is based upon a single specimen, *Hadentomum americanum gn. sp. n*, from the collection of Mr. Daniels. The new order Hapalopteroidea includes but one American specimen, of which one front wing only is known. The provisional new order Mixotermitoidea is based upon two genera, *Mixotermes* from Saxony and *Geroneura* from New Brunswick. The Protorthoptera embrace a series of forms transitional between the Palædictyoptera and the Orthoptera. Sixteen genera are referred to this order. The Protoblattoidea are considered transitional between the Palædictyoptera and the Blattoidea. Thirteen genera are referred to this order. An entirely new grouping of the cockroaches is adopted. The Paleozoic representatives of this order are grouped into eleven families, ten of which are here established as new. Eighty-nine genera are recognized, sixty-nine of which are described as new. A table prepared by Mr. David White accompanies the paper, showing the geological horizon as determined by paleo-botany and stratigraphy of the insect-bearing localities of the American Carboniferous.

"Die Fossilen Insekten," the second title of this year by Handlirsch, is intended to serve as "Ein Handbuch für Paleontologen und Zoologen." The fossil insects are treated chronologically by periods. No insects are recognized from deposits older than the Upper Carboniferous. The introductory part of the publication contains a synopsis of the orders of recent insecta. The Carboniferous insects are described in parts I, II, and III to p. 343. Permian insects follow (pp. 344 to 393). Mesozoic insects occupy the remainder of part III and IV. The remaining parts to be issued will complete the treatment of Mesozoic and Cenozoic forms in order. All known fossil Hexopoda are to be included in this work, and the described specimens so far as possible illustrated.

Sellard's paper on Odonata is Part I of a paper discussing the leading types of Permian insects. A new genus of Odonates, the first of this group obtained from the Permian, is described. The conclusions reached from a study of the Permian Odonates, and from a comparison of these with the Coal Measure forms, are that the wing venation of Paleozoic dragon-flies is not fundamentally different from that of modern dragon flies, as believed by Scudder, and that the Paleozoic dragon-flies are not to be separated as an order from Mezozoic and modern dragon-flies, as is done by Handlirsch, Three suborders are recognized for the order Odonata; Protodonata. Zygoptera, and Anisoptera. The second paper by Sellards is a résumé of the geological history of the cockroaches. Von Schlechtendal regards the vein in the hind wing of certain Coal Measure cockroaches, interpreted by Sellards as the costa, as being in reality the subcosta. Woodworth's paper on the wing veins of insects contains critical remarks on the venation of the wings of the better-known families of Paleozoic insects.

E. H. SELLARDS

The Place of Origin of the Moon—The Volcanic Problem. By WILLIAM H. PICKERING. *Journal of Geology*, Vol. XV, January–February, 1907, pp. 22–38.

To many geologists the arguments of this paper will appear to need no refutation and, if published in any other than a leading geological periodical, would not call for comment. There is danger, however, that by not formally presenting the contrary side of an argument, a greater credit and authority may be given to certain views by those in other branches of science than is warranted. It is because this article is of a nature which